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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,975	11/08/2000	Peter Paul Frans Reusens	Q61361	1060

7590 05/05/2004  
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EXAMINER

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 05/05/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/707,975

Applicant(s)

REUSENS, PETER PAUL FRANS

Examiner

Daniel Swerdlow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 16-23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 7, 14, 15 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 16 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, Claims 16 and 26 recite the broad

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recitation "the order of said low pass and high pass filters is less than 5", and the claim also recites "and preferably less than 2 or 2", which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 4, 6, 8, 9, 11, 13, 17 through 19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis (US Patent 4,042,786).

6. Regarding Claim 1, applicant discloses as prior art a telephone system wherein analog telephone signals are frequency multiplexed with digital data signals for transmission over a line (p. 1, lines 23). Therefore, applicant admits as prior art all elements except an incoming call being announced by a ringing indication signal having a voltage amplitude less than 30 V RMS. Freimanis discloses use of an audio tone alerting (i.e., ringing indication) signal in the same voltage range as voice signals (column 1, lines 18-21) which applicant admits have a voltage amplitude less than 1V RMS (p. 1, lines 30-32). It would have been obvious to one skilled in the art at the time of the invention to apply tone alerting as taught by Freimanis to the telephone system admitted as prior art for the purpose of avoiding the danger and potential damage due to high voltage signals.

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7. Regarding Claim 2, as shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious the audio tone alerting (i.e., ringing indication) signal having a voltage amplitude less than 20 V RMS.

8. Regarding Claim 4, the combination of admitted prior art and Freimanis does not disclose expressly the ringing indication signal having a voltage amplitude higher than 10 V RMS. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize a ringing indication signal having a voltage amplitude higher than 10 V RMS.

Applicant has not disclosed that a ringing indication signal having a voltage amplitude higher than 10 V RMS provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a voltage amplitude in the range of several volts because this is within the normal amplitude of telephone line signals. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of admitted prior art and Freimanis to obtain the invention as specified in Claim 4.

9. Regarding Claim 6, as stated above apropos of Claim 1, the combination of admitted prior art and Freimanis is shown to make obvious all elements except the ringing indication signal having a frequency lower than the frequency of analog telephone signals. Freimanis further discloses bursting the audio tone alerting signal at 20 Hertz (i.e., a frequency lower than the frequency of analog telephone signals) (column 4, lines 5-11). It would have been obvious to one skilled in the art at the time of the invention to apply 20 Hertz bursting as taught by Freimanis to the telephone system admitted as prior art for the purpose simulating the sound of a high voltage alerting signal.

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10. Claims 8 and 9 are essentially similar to Claims 1 and 2, respectively, and are rejected on the same grounds.

11. Claim 11 is essentially similar to Claim 4 and is rejected on the same grounds.

12. Claim 13 is essentially similar to Claim 6 and is rejected on the same grounds.

13. Regarding Claim 17, as stated above apropos of Claim 1, applicant admits as prior art all elements except the ringing signal generation means. Freimanis discloses a tone ringer (Fig., reference 30; column 3, lines 59-63) that responds to the tone alerting signal by producing an output that activates an 86 volt electromechanical ringer. It would have been obvious to one skilled in the art at the time of the invention to apply tone alerting to higher voltage ringing conversion as taught by Freimanis to the telephone system admitted as prior art for the purpose of being able to use a single device for both forms of alerting.

14. Regarding Claim 18, Freimanis further discloses use of an audio tone alerting (i.e., ringing indication) signal in the same voltage range as voice signals (column 1, lines 18-21) which applicant admits have a voltage amplitude less than 1 V RMS (p. 1, lines 30-32). It would have been obvious to one skilled in the art at the time of the invention to apply tone alerting as taught by Freimanis to the combination of prior art and Freimanis for the purpose of avoiding the danger and potential damage due to high voltage signals.

15. Regarding Claim 19, as shown above apropos of Claim 18, the combination of admitted prior art and Freimanis makes obvious the audio tone alerting (i.e., ringing indication) signal having a voltage amplitude less than 20 V RMS.

16. Regarding Claim 21, the combination of admitted prior art and Freimanis does not disclose expressly the ringing indication signal having a voltage amplitude higher than 10 V

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RMS. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize a ringing indication signal having a voltage amplitude higher than 10 V RMS. Applicant has not disclosed that a ringing indication signal having a voltage amplitude higher than 10 V RMS provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with a voltage amplitude in the range of several volts because this is within the normal amplitude of telephone line signals. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination of admitted prior art and Freimanis to obtain the invention as specified in Claim 21.

17. Regarding Claim 23, as stated above apropos of Claim 17, the combination of admitted prior art and Freimanis is shown to make obvious all elements except the ringing indication signal having a frequency lower than the frequency of analog telephone signals. Freimanis further discloses bursting the audio tone alerting signal at 20 Hertz (i.e., a frequency lower than the frequency of analog telephone signals) (column 4, lines 5-11). It would have been obvious to one skilled in the art at the time of the invention to apply 20 Hertz bursting as taught by Freimanis to the telephone system admitted as prior art for the purpose simulating the sound of a high voltage alerting signal.

18. Claims 3, 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis and further in view of Malerba et al. (US Patent 4,189,626).

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19. Regarding Claim 3, as shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious all elements except the ringing indication signal having a voltage amplitude higher than 1 V RMS. Malerba discloses a call (i.e., ringing indication) signal in the range of several volts (column 5, lines 40-43). It would have been obvious to one skilled in the art at the time of the invention to apply a call signal in the range of several volts as taught by Malerba to the combination of prior art and Freimanis for the purpose of utilizing the combination in a telephone system that employed such a call signal.

20. Claim 10 is essentially similar to Claim 3 and is rejected on the same grounds.

21. Regarding Claim 20, as shown above apropos of Claim 17, the combination of admitted prior art and Freimanis makes obvious all elements except the ringing indication signal having a voltage amplitude higher than 1 V RMS. Malerba discloses a call (i.e., ringing indication) signal in the range of several volts (column 5, lines 40-43). It would have been obvious to one skilled in the art at the time of the invention to apply a call signal in the range of several volts as taught by Malerba to the combination of prior art and Freimanis for the purpose of utilizing the combination in a telephone system that employed such a call signal.

22. Claims 5, 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis and further in view of Balachandran et al. (US Patent 6,324,268).

23. Regarding Claim 5, as shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious all elements except the ringing indication signal having no detectable components in the frequency band for digital data signals. Balachandran discloses



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increasing the start frequency of the data frequency band when a ring tone is detected (i.e., restricting the digital data band to avoid components of ringing indication) (column 9, lines 17-33). It would have been obvious to one skilled in the art at the time of the invention to apply start frequency increasing as taught by Balachandran to the combination of prior art and Freimanis for the purpose of reducing interaction of transmissions in the voice band with transmissions in the data band.

24. Claim 12 is essentially similar to Claim 5 and is rejected on the same grounds.

25. Regarding Claim 22, as shown above apropos of Claim 17, the combination of admitted prior art and Freimanis makes obvious all elements except the ringing indication signal having no detectable components in the frequency band for digital data signals. Balachandran discloses increasing the start frequency of the data frequency band when a ring tone is detected (i.e., restricting the digital data band to avoid components of ringing indication) (column 9, lines 17-33). It would have been obvious to one skilled in the art at the time of the invention to apply start frequency increasing as taught by Balachandran to the combination of prior art and Freimanis for the purpose of reducing interaction of transmissions in the voice band with transmissions in the data band.

26. Claims 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis and further in view of Williamson et al. (US Patent 6,477,249) and further in view of Russell et al. (US Patent 5,757,803).

27. Regarding Claim 16, as shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious all elements except the use of low-order filters in the

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splitter. Williamson discloses use of a 2<sup>nd</sup> order low pass filter in a DSL splitter (column 6, line 66 through column 7, line 2). It would have been obvious to one skilled in the art at the time of the invention to apply a low order low pass filter as taught by Williamson to the combination of prior art and Freimanis for the purpose of reducing impedance transformation. Russell discloses use of a 1<sup>st</sup> order high pass filter in a DSL splitter (column 4, lines 34-36). It would have been obvious to one skilled in the art at the time of the invention to apply a low order high pass filter as taught by Russell to the combination of prior art and Freimanis for the purpose of attenuating POTS signaling voltages.

28. Regarding Claim 26, as shown above apropos of Claim 17, the combination of admitted prior art and Freimanis makes obvious all elements except the use of low-order filters in the splitter. Williamson discloses use of a 2<sup>nd</sup> order low pass filter in a DSL splitter (column 6, line 66 through column 7, line 2). It would have been obvious to one skilled in the art at the time of the invention to apply a low order low pass filter as taught by Williamson to the combination of prior art and Freimanis for the purpose of reducing impedance transformation. Russell discloses use of a 1<sup>st</sup> order high pass filter in a DSL splitter (column 4, lines 34-36). It would have been obvious to one skilled in the art at the time of the invention to apply a low order high pass filter as taught by Russell to the combination of prior art, Freimanis and Russell for the purpose of attenuating POTS signaling voltages.

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29. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis and further in view of Birck (US Patent 3,591,728). As shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious all

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elements except switching means for isolating the telephone port from the line port when a ringing signal is applied to the telephone port. Birck discloses relay contacts (i.e., switching means) (Fig., references 13a, 13b; column 5, lines 7-34) that isolate a telephone apparatus and local ringing generator from a carrier terminal connection during ringing. It would have been obvious to one skilled in the art at the time of the invention to apply local ringing voltage isolation as taught by Birck to the combination of prior art and Freimanis for the purpose of preventing the locally generated ringing voltage from interfering with the operation of a subscriber interface.

30. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Freimanis and further in view of Tate et al. (US Patent 6,400,803). As shown above apropos of Claim 1, the combination of admitted prior art and Freimanis makes obvious all elements except switching means for disconnecting the digital data signal port from the line port when improper power is detected. Tate discloses a switch (i.e., switching means) (Fig. 3, reference 301; column 4, lines 50-54) that isolates a DSL Modem from the subscriber line. It would have been obvious to one skilled in the art at the time of the invention to apply digital equipment disconnection as taught by Tate to the combination of prior art and Freimanis for the purpose of preventing the digital equipment from interfering with the lifeline operation of POTS equipment.

***Allowable Subject Matter***

31. Claims 7, 14, 15, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

32. The following is a statement of reasons for the indication of allowable subject matter:

33. Regarding Claim 7, as shown above apropos of Claims 1 and 6, the prior art makes obvious low-voltage ringing signals with frequencies in and below the voice band. Further in the case of telephone carrier systems, as illustrated by, for example, by US Patent 4,197,433 to Bronner, alerting signals are known to be conveyed at frequencies above the voice band. However, the use of a single frequency out of a set of data carriers for conveying an alerting signal is neither anticipated nor made obvious by the prior art. As such, Claim 7 is allowable matter.

34. Claims 14 and 24 are allowable for the same reasons as Claim 7.

35. Regarding Claim 15, as shown above apropos of Claim 1, the prior art makes obvious a terminal that responds to either high amplitude or low amplitude alerting signals. However, the selection of an alerting signal amplitude based on data activity is neither anticipated nor made obvious by the prior art. As such, Claim 15 is allowable matter.

***Conclusion***

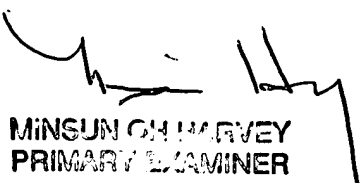
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 703-305-4088. The examiner can normally be reached on Monday through Friday between 8:00 AM and 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forrester Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER